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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,225	12/14/2000	R. Dean Adams	BUR920000192US1	6368

7590 10/07/2004

IBM Microelectronics
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EXAMINER

LAMARRE, GUY J

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 10/07/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/737,225

Applicant(s)

ADAMS ET AL.

Examiner

Guy J. Lamarre, P.E.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004 and 26 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

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FINAL OFFICE ACTION

1. This office action is in response to Applicants' Amendment of 19 Feb. 2004 and 26 Aug. 2003.

1.1 **Claims 2-5** are added, **Claim 1** is cancelled. **Claims 2-5** remain pending.

1.2 The **prior art** rejections of record are maintained in response to Applicants' amendment.

1.2.1 The objections of record are withdrawn in response to Applicants' amendment.

Response to Arguments

1.3 Applicants' arguments of 19 Feb. 2004 and 26 Aug. 2003 have been fully considered, but are not persuasive.

REMARKS

2. In response to **Claims 2-5**, Applicants' arguments/amendment, re: testing of memory wherein write operation can access more cells than read operation, are not persuasive because the prior art of record performs same functionality. For example, a memory comprises plural cells at plural memory locations with means to write to all plural locations, yet with means to read a single specified location of interest via controlled selection means of access.

Claim Rejections - 35 USC ' 103

3.1 **Claims 2-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Applicants' Admitted prior art** (hereinafter **Admitted prior art**) in view of **Gans** (US Patent No. 6,507,924; DATE-FILED: Feb. 17, 1998).

As per **Claim 1**, **Admitted prior art** substantially discloses, on page 2 lines 1-15, an equivalent method (marching tests, checkerboard, etc.) for testing a memory set of plural cells having means for data write and data read and made up of plural rows and columns of cells, along with means to access said each cell of said memory to apply test stimuli thereto via row selection of each said cell, unique data pattern write and read operations.

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Not specifically described in detail in **Admitted prior art** is the step for provision of circuitry for the data read and data write to have different widths.

However, Gans, in an analogous art, discloses a “*Method and apparatus for testing SRAM memory cells*” wherein a write driver is configured to vary data read and data write pulses so as to vary voltage application rate as shown, e.g., in Fig. 6 and col. 7 line 44 et seq.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the data access operations in **Admitted prior art** by including therein the technique of varying the length of data read and data write pulses, as taught by **Gans**, because such modification would provide the data access operations of **Admitted prior art** with an advantageous algorithm whereby a “*voltage margin test detects memory cells 10 that may fail upon the occurrence of slight variations in the voltages or write pulse widths t_{WPW} of data signals on the digit lines DL and DL during normal write operations. In the test mode write driver circuit 50, the rate at which the voltage on one of the digit lines DL and DL goes low during the test write mode may be adjusted by varying the reference voltages developed by the reference voltage circuits 68 and 86 as well as varying the characteristics of the transistors 64 and 78*,” or whereby each memory cell may be accessed. {See **Gans**, Id., col. 7 line 67 et seq.}

Conclusion

4. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4.1 Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

or faxed to: (703) 872-9306 for all formal communications.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Fourth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guy J. Lamarre, P.E., whose telephone number is (703) 305-0755. The examiner can normally be reached on Monday to Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (703) 305-9595.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Guy J. Lamarre, P.E.
Primary Examiner
10/1/04
